



Contribution ID: 199

Type: **Workshop**

## Hands-On Practical Introduction to Quantum Computing

*Sunday, 1 December 2024 13:30 (1h 30m)*

This practical introduction to quantum computing aims to offer a foundational understanding of key quantum computing concepts, algorithms, and practical applications. The lectures will cover the basics of quantum computing including qubits, entanglement, and quantum gates, as well as an introduction to quantum circuits. As an example, we will explore in the tutorial the quantum dynamics of a spin system on quantum computer.

**Target Audience:** Students, academics and industry representatives interested in a practical introduction to quantum computing.

**Prerequisites:** Basic Python knowledge

### **Student or Postdoc?**

### **Email address**

### **Co-Authors**

### **CHPC User**

No

### **CHPC Research Programme**

### **Workshop Duration**

Half-day

**Primary author:** PETRUCCIONE, Francesco (UKZN)

**Presenter:** PETRUCCIONE, Francesco (UKZN)

**Session Classification:** Workshop

**Track Classification:** Quantum Computing